IMPLANTABLE LEAD AND METHOD FOR STIMULATING THE VAGUS NERVE

ABSTRACT

Methods and apparatus for stimulating the right vagal nerve within a living body via positioning an electrode portion of a lead proximate to the portion of the vagus nerve where the right cardiac branch is located (e.g., near or within an azygos vein, or the superior vena cava near the opening of the azygos vein) and delivering an electrical signal to an electrode portion adapted to be implanted therein. Stimulation of the right vagus nerve and/or the cardiac branch thereof act to slow the atrial heart rate. Exemplary embodiments include deploying an expandable or self-oriented electrode (e.g., a basket, an electrode umbrella, and/or an electrode spiral electrode, electrode pairs, etc). Various dedicated and single-pass leads are disclosed, as well as, various electrodes, and stabilization means. The methods include preserving sinus rhythm, avoiding asystole, preserving A-V synchrony, automatically determining parameter combinations that achieve these features, and further (in one embodiment) automatically determining parameter combinations achieve these features and reduce current drain.